

Ambient Ground Water Network - DEP/USGS

The first Ambient Ground Water Monitoring Network was established by NJDEP and USGS in 1983. The original network was designed to determine the concentration range of chemical constituents as a function of rock type. Having addressed that goal, the network was redesigned in 1998 to address the following objectives: (1) assess status and trends in newly recharged ground water; (2) define ground water quality by land use type (urban/suburban, agricultural and undeveloped); (3) determine potential ground water impacts on surface water quality; and (4) identify emerging ground water quality issues.

The redesigned network is comprised of 150 shallow wells. All wells in the network will be installed and sampled by 2004. Well locations were identified using a stratified random approach, based on land use type. Sixty wells are located in urban/suburban settings, sixty wells are located in agricultural settings and thirty wells are located in undeveloped settings. With a sampling rate of 30 wells per year, sampling frequency for network wells is once every 5 years.

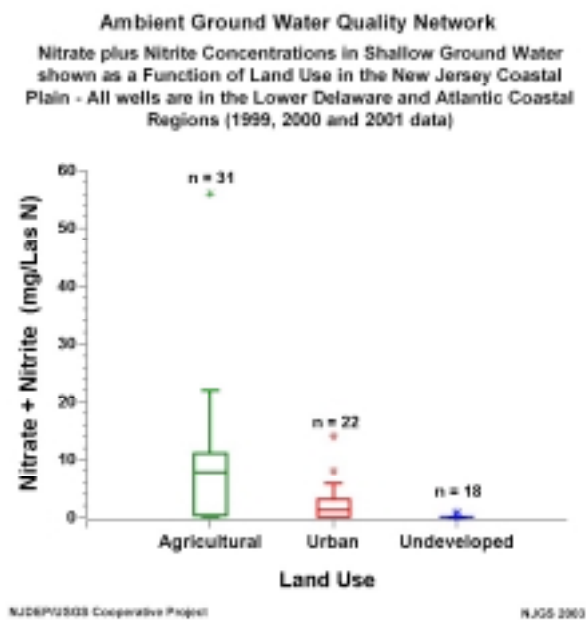
Parameters monitored:

- Field Parameters : Specific conductance, pH, alkalinity, D.O., water temperature and turbidity.
- Laboratory Parameters : Dissolved major ions and trace elements (metals), dissolved nutrients, volatile organic compounds, pesticides and gross alpha / beta.

The redesigned network data are currently available from the following sources: (1) the USGS computerized data system, NWIS (<http://nj.usgs.gov>) and (2) the USGS annual reports “ Water Resources Data – New Jersey.”

In the future, the data will also be available on and in:

(1) the New Jersey Geological Survey web site in an I-Map format (internal NJGS beta version currently operational), (2) As summary reports in the 305(b) portion of the Integrated Water Quality Monitoring and Assessment Report and NJDEP/USGS Informational Circulars, and (3) EPA’s computerized data system, STORET. Older network data are available on and in: (1) the USGS computerized data system, NWIS, (2) the USGS annual reports “ Water Resources Data – New Jersey”, and (3) on the NJGS web site (Piedmont data only) (www.nj.gov/dep/njgs), and (4) in NJGS publications (Newark Basin and Piedmont and Valley and Ridge Physiographic Province – in Press).



New Jersey's Ambient Groundwater Monitoring Network

- FY 2003**
 X Agriculture
 X Undeveloped
 X Undeveloped (Planned)
 X Urban
 O Urban (Planned)
- FY 2002**
 \$ Agriculture
 \$ Undeveloped
 \$ Urban
- FY 1999 - 2001**
 U Agriculture
 U Undeveloped
 U Urban
- Watershed Management Areas

10 0 10 Miles

New Jersey Geological Survey
 Karl Muessig, State Geologist

Monitoring station locations and types
 provided by the New Jersey Geological Survey
 Well sampling provided by Water Monitoring and
 Standards, Leslie McGeorge, Administrator
 and the United States Geological Survey